

# Wireless GSM Alarm System

## (GSM-01)



## User Manual

### ***Profile***

For a better understanding of this product, please read this user manual thoroughly before using it.

## **I. Features**

1. GSM 900/1800/1900 bands, can be used all over the world.
2. 3 zones for wired detectors and 16 zones for wireless detectors.
3. Set arm, disarm, emergency alarm by remote controller.
4. Set arm, disarm, monitor, output by calling the host.
5. Set arm, disarm, monitor, output by sending SMS.
6. Monitor environment on the spot.
7. Voice and message alert.
8. 5-group phone + room number; 1 group alarm monitor center phone.
9. 2-group phone to report alarm and non-alarm status.
10. Can program 7-group alarm messages.
11. Easy to set ON or OFF for every wired or wireless detector.
12. 1 relay output to trigger camera when alarm.
13. 2 output for home appliances connection (lamp, cooker, air condition).
14. SMS alert for external power failure or recovery.
15. Built-in battery ensures normal work even power failure.

## **II. Installation**

### **1. Host**

#### **a. Insert SIM card in alarm system**

Press the yellow point on the unit with a pencil tip or other tools, SIM card tray will come out. Put the SIM card into the tray and make sure the Metal contacts of the card to be downwards, and then push the tray back.

Before inserting SIM card in the alarm unit, using a regular mobile phone do the following steps:

---Set PIN code request to off

---Delete all stored numbers

#### **b. Connect the antenna**

Screw the antenna to the unit carefully; do not over-tighten the nut or leave it too loose!

#### **c. Connect the power supply**

Plug the alarm system into power and turn on the power switch. The signal status LED on the unit will turn red and last for 20 seconds. This shows it's waiting for wireless detectors to be coded into the unit. Then the status LED will turn orange with flash, indicating the unit is checking the SIM card and searching for GSM network. After checking, if the LED changes to green with slow flash, it shows phone numbers have been saved in the unit, and the unit is now in "Arm" status. If the LED keeps in green, it means phone numbers have not been saved in the unit, and the unit is in "Disarm" status, you can call in or send SMS to program the phone numbers.

## LED status explanation

LED		LED Status	System working status
POWER		Off	Hasn't turned on the switch; hasn't connected the power; no power in built-in battery
		Red	power supply is normal
ST AT US	Power on	Red	<b>Ready to code wireless sensors</b>
		Orange (flash slowly)	Check SIM card and search GSM network
		Green (flash slowly)	SIM card and GSM signal are normal; have stored numbers in SIM card; in arm status
		Green	have not stored numbers in SIM card; in disarm status
	Normal working	Red (flash slowly)	In alarm status
		Red (flash quickly)	Remote controlled by SMS commands or phone
		Green	Disarm
		Green (flash slowly)	Out Arm
		Green (flash quickly)	Home Arm
MONITOR		On	Can monitor the scene when alarming, but the siren will not ring
		Off	Can not monitor the scene when alarming, but the siren will ring
ALARM		On	The siren will ring when alarming
		Off	The siren will not ring when alarming

### d. Configuration of the alarm unit:

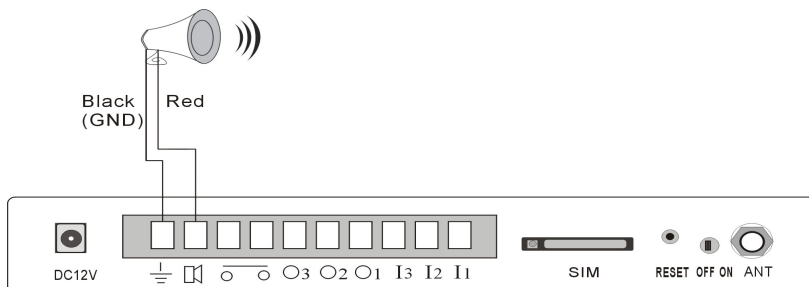
There are 10 connect ports at the top side of the unit:

**(GND; SIREN; RELAY1; RELAY2; O3 (SPEAKER); O2; O1; I3; I2; I1):**

**GND:** power ground.

**SIREN:**

Connect the black wire to GND port and the red wire to siren port.



## I1, I2, I3:

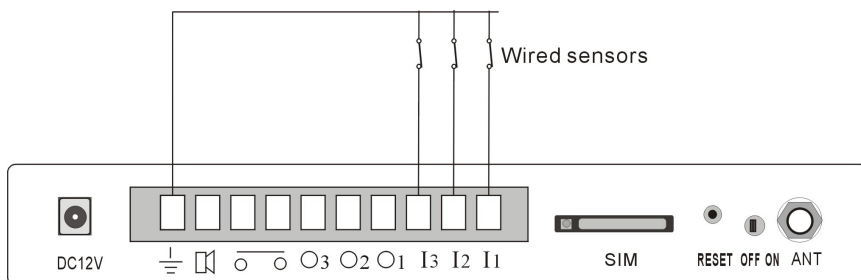
### Connect wired sensors

Three inputs are available to connect wired sensors. Inputs are independent and not coded as different zones. When these sensors are triggered, the unit will send SMS message:

### Wire Activate (1~3).

Sensors can be NO (normally Open) or NC (normally Close) type.

More than 1 sensor can be connected to one input: connect their alarm contacts in series. The number of the sensors is not limited as long as the total resistance is under 220 ohms.



## O1, O2:

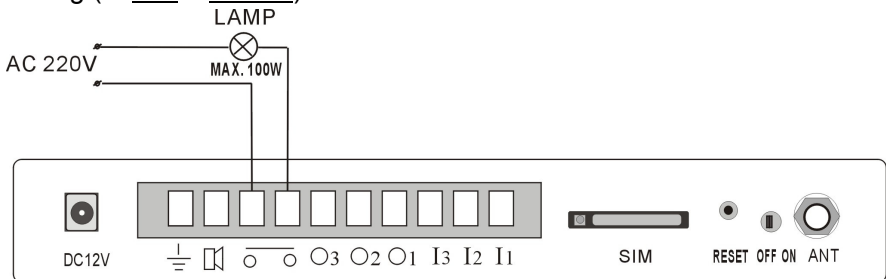
These 2 ports for output, you can call in or send SMS to set them. If output of these goes high, the light of OUT 1 or OUT 2 will light on the panel. **(non-specialist should use it with caution!!)**

### O3 (SPEAKER):

This port is for voice output, it can be connected to the speaker. The other port of the speaker is to connect to ground. You can control it by call in or send the SMS.

### RELAY1, RELAY2:

These two ports will close 3 minutes when alarm happens. You can use these two ports to start the power supply of the camera when alarm happens, also you can disable this function by setting command 16#1#, you can also make this relay close or open anytime by sending SMS or dialing (94#1# or 94#0#).



### Wiring Explanation: For home-appliance control (for special order)

#### The controller box has four wires:

- i). Two yellow AC 220 wires to be connected with Home appliance.
- ii). GND, +12V DC wires to be connected with a 12V DC (Power supply)

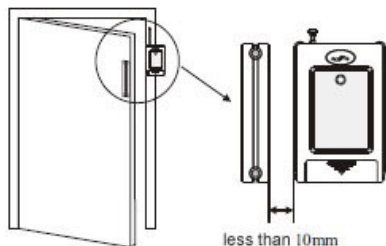
### NOTE:

- ✧ Try to install the main panel in the center of defense zone and pull out the antenna to get longer wireless receiving distance.
- ✧ Installation position should be far away from huge metal objects and wireless interference.

## 2. Door sensor

Door sensors are used for detecting the status of open and close of windows and doors. It will detect it and send the signal to main panel.

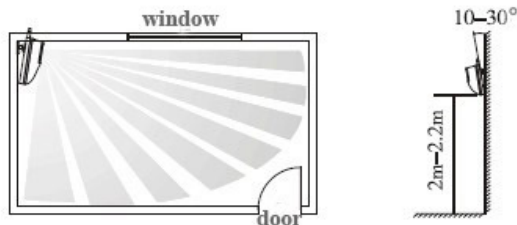
1. Tear apart the double-side adhesive tape on the magnet and the transmitter. Then adhere them to the appropriate position.
2. Magnet should be near to the side of transmitter with indicator. The two should align with each other and the distance should not exceed 10mm.
3. Please plug out the antenna for better signal.
4. If the low-power indicator is on, please change the battery.



## 3. Wireless PIR detector

PIR detectors are used to detect the movement within a certain range.

- ✧ Fix the adjustment bracket on the wall with the provided screws and attach the detector to the bracket. It is recommended to mount it at a height of 2-2.2m above the floor.
- ✧ Effect of the PIR detection is best when the detection direction is in 90° angle with the walking direction of the intruder. Choose the most suitable installation place and angle according to actual situation and taking the following installation diagram as reference to ensure the detection effect is best.
- ✧ Please do not fix it under direct sunlight or other strong lights and also keep it away from places with frequent strong air stream.
- ✧ If the low-power indicator is on, please change the battery.



### III. Set alarm phone numbers

You can send message to the unit to set 5 alarm phone numbers and 7 alarm SMS.

The command format: password # operation code # content #

1. Save the alarm phone numbers.

123456#5X# alarm phone numbers #. (X = 1 to 5)

Save 5 group alarm phone numbers into the base.

For example: 123456#51# 13905950001#

Save the 1st alarm phone number 13905950001 into the base.

2. There are 7 default SMS contents in the base, but you can change it.

When the wireless detector in zone 01 to 05 is triggered, the default SMS content will be: Wireless Activated (X); X can be 01 to 05.

For example:

if detector in zone 01 is triggered the SMS will be:

Wireless Activated (01)

When the wireless detector in zone 06 to 16 is triggered, the default SMS content will be:

Wireless Activated (X); (X=06-16)

When the wire detector is triggered, the SMS message will be: Wire Activated (X); (X=1-3) , for port 1 to 3 alarm



3. You can send SMS commands to rewrite the above 7 kinds of SMS contents, every SMS cannot exceed 24 English characters.

123456#8X# SMS content #. (X = 1 to 5)

For example:

Rewrite the 1<sup>st</sup> SMS content into "Middle door open":

123456#81#Middle door open#

Rewrite the 6<sup>th</sup> to 16<sup>th</sup> SMS content into "Middle window open":

123456#86# Middle window open#.

Rewrite the wire detectors SMS content into "Back window open"

123456#87# Back window open#.

#### **IV. Test the host alarm**

When you start the base, if the base is in Disarm status, the signal LED keep still green, you can use controller to change the base into Arm status, or you can send SMS (123456#1#1#) to the base to change the base into Arm status, the signal LED will change to flashing green.

1. Under Arm status, with green LED on, any port of input (I1, I2, I3) short circuit or disconnected, or any wireless detectors has been activated, or you press the emergency key on the controller, the alarm system will send alarm information by SMS, and dialing out stored telephone numbers.
2. It will send SMS before dial alarm phone numbers. If the SMS function has been closed or limited, it will only dial out the preset telephone numbers. You can make them disarm with remote controller.
3. When there is alarm, it will dial out phone numbers, you can answer

the phone (not need input password) to operate it, press 3# 1# to start the siren and press 3# 0# to stop it; press 4# 1# to listen-in and press 4# 0# to stop it; press 93# 1# to talk with the spot and press 93# 0# to stop it.

4. When there is alarm, it will dial out phone numbers, you can answer the phone(not need input password ),if you do not want the unit to dial next phone numbers, just press 1# 1# or 1#2# to re-turn the unit into Arm status.
5. When there is alarm, you can use the controller to change the base into disarm status when you are in nearby can control the situation.
6. When the external power is cut off, the system will send SMS **“Power changer off”** to inform. When the external power recovered, the system will send SMS **“Power changer on”** to inform.

## **V. Control the host**

1. Send message to the host phone number (SIM Card number)

Send message to the unit: password 123456#, add the following commands to control the unit;

2. Call the host phone number (SIM Card number)

Call in the unit and enter password 123456#, then input the following command to set the base:

**Commands table:**

<b>Com</b>	<b>Function</b>	<b>Com</b>	<b>Function</b>
1#1#	Out arm* (all detectors work)	1#2#	Home arm (part detectors work)
1#0#	Disarm*(all detectors not work)		
3#1#	Siren Sounds immediately	3#0#	Stop sounding
4#1#	Start listen-in* Call the alarm panel and then input this command	4#0#	Stop listen-in Call the alarm panel and then input this command
11#1#	Need siren sound when alarming *	11#0#	No siren sound when alarming
12#1#	Send SMS when alarming *	12#0#	No SMS when alarming
15#1#	Dial phone number when alarming *	15#0#	Just alarm and no dialing
16#1#	Relay does not close for 3 Min when alarming	16#0#*	Set Relay close for 3 Min when alarm*
21#1#	Siren rings when pressing out arm button*	21#0#	Siren off when pressing out arm button
22#1#	Siren rings when pressing home arm button*	22#0#	Siren off when pressing home arm button
23#1#	Siren rings when pressing disarm button*	23#0#	Siren off when pressing disarm button*

27#(00-99)#	Arm delay, 00-99: delay time (default: 10sec)		
28#(00-99)#	Alarm delay, 00-99: delay time (default: 00)		
30##	<i>show the arm and disarm status of every zone</i> (SMS command applicable only)		
31#--#	Change password. Enter a new password (1—6 bit).		
38#--#	Set arm of zone independently (wireless zone: 1—16; wire zone: 21—23)		
39#--#	Set disarm of zone independently (wireless zone: 1—16; wire zone: 21—23)		
50##	<b>show preset phone numbers in the host</b> (SMS command applicable only)		
51#--#	First group phone number(0—15bit)	52#--#	Second group phone number(0—15bit)
53#--#	Third group phone number(0—15bit)	54#--#	fourth group phone number(0—15bit)
55#--#	Fifth group phone number(0—15bit)		
80##	<b>show preset SMS in the host</b>		
81#--#	Wireless zone 01 Message(0-24bit)	82#--#	Wireless zone 02 Message(0-24bit)
83#--#	Wireless zone 03 Message(0-24bit)	84#--#	Wireless zone 04 Message(0-24bit)
85#--#	Wireless zone 05 Message(0-24bit)	86#--#	Wireless zone <b>I</b> Message(0-24bit) ( <b>I=06-16</b> )

87#--#	Wired zone Message(0-24bit)		
90##	<b>Show Output status in the host</b>		
91#1#	Set Output 1 to high	91#0#	Set Output 1 change to low
92#1#	Set Output 2 to high	92#0#	Set Output 2 change to low
93#1#	Set talk to the host available (Output 3)	93#0#	Set talk to the host unavailable (Output 3)
94#1#	Set Relay to be connected	94#0#	Set Relay to be disconnected
95#1#	Set alarm when input 1 open	95#0#	Set alarm when input 1 connect to GND*
96#1#	Set alarm when line input 2 open	96#0#	Set alarm when line input 2 connect to GND*
97#1#	Set alarm when line input 3 open	97#0#	Set alarm when line input 3 connect to GND*

**Note:**

1. In the above table, '\*' stands for **default setting**.
2. Alarm delay is not workable for smoke detector, gas detector or emergency button. That is, even though this system is set as alarm delay, triggering of the mentioned sensors will cause immediate alarm without delay.
3. In alarm delay state, if any of the door sensor, PIR sensor or wired sensor is triggered, the siren will ring once per 5-second. After the delay time, the siren will keep ringing consecutively, and the panel will send SMS and make alarm call.
4. For the above phone operation, one beep shows your input

successful, a long beep shows the sentence you input is successful, two short beeps shows your input is failed, you should try again.

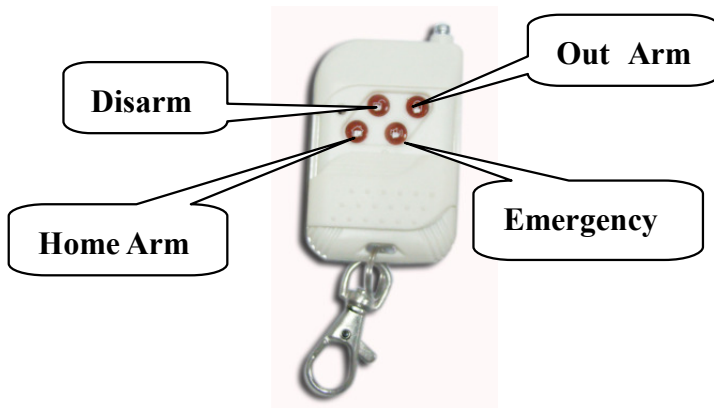
5. In the above SMS operation, you will receive a reply message for confirmation after you send the message command to the base, the replied message for example:

**Disarm, Sms: ON, Phone: ON, Siren: ON, Center Tel: OFF, Arm Center Tel: OFF, Disarm Center Tel: OFF**


You will know the working state of the base then (arm, disarm or alarm).

## VI. Remote controllers


The remote controller has four buttons:



1. **Out Arm:**


Press the “Out Arm ” button on the remote controller, the STATUS indicator on the main panel flashes in orange; 10 seconds later, it will turn green with slow flash. The system enters Out Arm mode, and all the detectors will be in working status.

2. **Home Arm:**


Press the “Home Arm ” button, the STATUS indicator on the main panel flashes in orange; 10 seconds later, it will turn green with fast flash.

Detectors inside the house (in inner defense zone) will not work, only the detectors outside the house (in outside defense zone) will work, so that people inside can move freely, but others who break in from outside will trigger the alarm.

3. **Disarm:**

Press “Disarm ” button, the system will enter into disarmed status, the STATUS indicator on the main panel is green.

4. **Emergency:**

When there is an emergency, press the “Emergency ” button on the remote controller, the system will alarm immediately no matter it is in arm or disarm status.

## VII. Add more detectors

You can add new sensors or detectors, such as wireless door sensors, PIR Sensors, gas and smoke detectors into the unit.

1) Add sensors ready to work when you set both **Out Arm** and **Home Arm**:

When the GSM host begins to be powered on, the status LED light on panel will be red for 20 seconds, this is code learning mode. You can trigger the sensors or detectors, and the red LED will flash to show it is coded successfully into the host.

The coding mode ends 20 seconds later automatically, and system enters into working mode, status LED light on panel will change to yellow, then to green.

2) Add sensors into inner defense zone. (Detectors in this zone are ready to work when you set **Out Arm**, and will not work when you set **Home Arm**

When the GSM host begins to be powered on, the status LED light on panel will be red. Push the reset button for one second, the status LED light will light up in orange for 20 seconds. This is code learning mode of inner defense zone. You can trigger the sensors or detectors, the LED will flash in red to show it is coded successfully into inner defense zone.

For above operation, the host will exit code learning mode 20 seconds later automatically, and enters into working mode, the light on



panel changes to orange to search for GSM network, then to green.

**Note:** If there were 4 wireless sensors in the host, they stand for zone 1 to zone 4, and then the new added sensor will be 5th zone in the host.

### **VIII. Delete detectors**

In case of the coded sensors or detectors are lost, you can delete the coded information of these detectors so that they can not control your alarm system.

Keep pressing the reset button, then power on the system. One beep sound or LED flashes, shows reset is successful. All registered detectors have been deleted from the unit. You can register them again with the above mentioned procedures. System reset will not change the SMS message.

### **Basic Kit:**

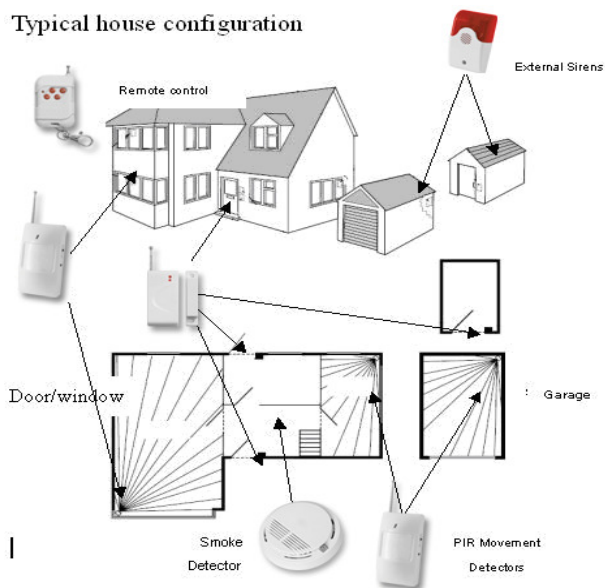
- Main Panel – 1 pc
- Wireless PIR detector – 1 pc
- Wireless door (gap) sensor – 1 pc
- Remote controller – 2 pcs
- Antenna – 1pc
- Mini wired siren – 1 pc
- Power adaptor – 1pc
- User manual – 1pc

## The following sensors are optional:



Optional sensors/detectors are packed separately. You can choose according to your specific requirements.

### Typical house configuration



## TECHNICAL PARAMETERS

### Main Panel

Static current: 20mA

Power: 9V-12V DC

Working temperature:  $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$

GSM: 900/1800/1900MHz band

Receiving code: ASK

Frequency: 433MHZ

Wireless distance: 100 M

Wireless detectors: 16

Wire detectors: 3

### Wireless Gap Detector (Door/ Window Contact)

Power Supply: DC12V (inner 7.4V battery)

Static Current:  $\leq 20 \mu\text{A}$

Transmission Current:  $\leq 15\text{mA}$

Transmission Frequency:  $433\text{MHZ} \pm 0.5\text{MHZ}$

Transmission Distance: No obstacle 80m

Internal Distance: 15 mm

Working Condition: Temperature  $-10^{\circ}\text{C} \sim +40^{\circ}\text{C}$

Humidity  $\leq 90\% \text{ rh}$

### **Wireless PIR Detector**

Power Supply: DC9V (inner 9V battery)

Static Current:  $\leq 100 \mu\text{A}$

Transmission Current:  $\leq 20\text{mA}$

Transmission Frequency:  $433\text{MHz} \pm 0.5\text{MHz}$

Transmission Distance: No obstacle 80m

Detective Speed: 0.3 - 3m/s

Detective Distance: 5 - 12m

Detective Range: Horizontal  $110^\circ$  Vertical  $60^\circ$

Working Condition: Temperature  $-10^\circ\text{C} \sim +40^\circ\text{C}$

Humidity  $\leq 90\text{ rh}$

### **Remote Controller**

Power Supply: DC=12V~8.4 (Inside A23 DC=12V dry battery)

Static Current: 0

Emission Current:  $\leq 15\text{ mA}$

Emission Frequency:  $433 \pm 0.2\text{ MHz}$

Emission Speed:  $T \leq 1\text{ second}$

Emission Distance: no obstacle 80m

Working Environment: Temperature  $-10^\circ\text{C} \sim +40^\circ\text{C}$

Humidity  $\leq 90\%$

## FAQ

Problems	Causes	Solutions
Cannot alarm by phone	<ol style="list-style-type: none"><li>1. Hasn't armed</li><li>2. Less than 30 seconds after arming</li><li>3. Set wrong phone number</li><li>4. The two parts of door/window sensor is installed too far from each other</li><li>5. Haven't activated PIR</li><li>6. Hasn't checked code</li></ol>	<ol style="list-style-type: none"><li>1. Arm the unit</li><li>2. Operate after 30 seconds</li><li>3. Set the number again according to the manual</li><li>4. Adjust the installation place of the door sensor</li><li>5. Activate the PIR</li><li>6. Check code again</li></ol>
Remote controlling distance is too short and the light indicator is not on bright enough	<ol style="list-style-type: none"><li>1. The battery of remote controller is rusty</li><li>2. Low battery</li></ol>	<ol style="list-style-type: none"><li>1. Clean the rust</li><li>2. Change battery</li></ol>
Light indicator of door sensor and PIR is always on.	Low power battery	Change battery
Dial alarm number slowly	The main panel has stored other numbers	Set it again according to the operation manual

<p>The main panel cannot receive signals from the accessory</p>	<ol style="list-style-type: none"> <li>1. Low power battery in the accessory</li> <li>2. There is block between the control panel and the wireless accessory or the distance between them is too far</li> <li>3. The accessory has not been coded to the panel</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace the battery</li> <li>2. Pull out the antenna of the accessory and the main panel, and adjust the position</li> <li>3. Code it to the main panel</li> </ol>
---	---	--